Geography

Unit 13 : World Mapping

Topics Covered

- World Map
- Africa
- Australia
- North America
- South America

Space for Notes

World Map

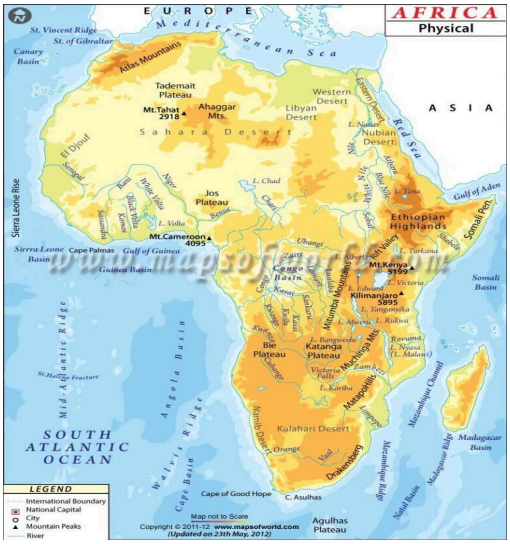
- ***Continents:*** *Asia, Africa, North America, South America, Antarctica, Europe, and Australia.*
- ***Oceans:*** *pacific, atlantic, indian, southern ocean, arctic ocean.*
- ***Size-wise countries:*** *Russia, Canada, China, USA, Brazil, Australia, India, etc.*

Africa

- ***Waterbodies around Africa:***
    - ***Strait of Gibraltar:***
        - *The **Strait of Gibraltar** is a narrow waterway that connects the **Atlantic Ocean** to the **Mediterranean Sea** and separates **southern Spain (Europe)** from **northern Morocco (Africa)**.*
    - ***Gulf of Guinea:***

- *Located in the Eastern Atlantic Ocean, off the western coast of Africa.*
- ***Bordering Countries:*** *Nigeria, Ghana, Ivory Coast, Cameroon, Angola, and others.*

- ***Walvis Bay:***
  - ***Location:*** *Atlantic Ocean, off the coast of* ***Namibia.***
  - *It is a deep-water natural harbor, historically controlled by South Africa but now part of Namibia.*
- ***Agulhas Sea (Agulhas Current):***
  - ***Location:*** *Off the southeastern coast of* ***South Africa****, part of the Indian Ocean.*
  - *Strong ocean currents flow from the Indian Ocean to the Atlantic.*
- ***Mozambique Channel:***
  - ***Location:*** *Between* ***Mozambique*** *(mainland Africa) and* ***Madagascar.***
- ***Bab el Mandab:***
  - ***Location:*** *Narrow strait between* ***Yemen*** *(Middle East) and* ***Djibouti/Eritrea*** *(Africa).*
  - ***It Connects*** *the* ***Red Sea*** *to the* ***Gulf of Aden*** *and the* ***Indian Ocean.***
- ***Gulf of Suez:***
  - ***Location:*** *Northern end of the* ***Red Sea****, near* ***Egypt***
  - ***Connects:*** *The* ***Suez Canal*** *to the Red Sea.*
  - *The entrance to the Suez Canal, linking the Mediterranean and the Indian Ocean.*



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- **Gulf of Aqaba:**
  - **Location:** Northern extension of the **Red Sea.**
  - **Bordering Countries: Egypt, Israel, Jordan, and Saudi Arabia.**
- **Gulf of Aden:**
  - **Location:** Between **Yemen** and **Somalia**, connecting the Arabian Sea to the Red Sea via Bab el Mandab.
- **Mediterranean Sea:**
  - It is an **intercontinental sea** that is **bordered by** the continent of **Europe in the north**, by **Asia in the east,** and by **Africa in the south.**

  - In the west, the **Mediterranean Sea is connected to the Atlantic Ocean via the narrow Strait of Gibraltar.**
  - In the extreme northeast, it is **connected to the Black Sea via the Dardanelles Strait, the Sea of Marmara, and the Bosporus Strait.**
  - The Mediterranean Sea is also **connected to the Red Sea via the Suez Canal** in the southeast.
  - **Bordering Countries:**
    - **22 countries and one territory** (Gibraltar - a British Overseas Territory) have coasts on the Mediterranean Sea.

- *The **European Countries** are **Spain**, **France**, **Italy**, **Malta**, **Monaco**, **Slovenia**, **Croatia**, **Bosnia** and Herzegovina, Montenegro, **Albania**, and **Greece**.*
- *The **West Asian (Middle Eastern) countries** bordering the Mediterranean Sea are **Turkey**, **Syria**, **Lebanon**, **Israel**, **the Palestinian Gaza Strip**, and the divided island of **Cyprus**.*
- *Five **North African nations** have coasts on the Mediterranean Sea: **Morocco**, **Algeria**, **Tunisia**, **Libya**, **and Egypt**.*

Space for Notes

Prelims PYQ

Q) Which one of the following countries of South-West Asia does not open out to the Mediterranean Sea?

(a) Syria

(b) Jordan

(c) Lebanon

(d) Israel

Q) The Mediterranean Sea borders which of the following countries?

1. *Jordan*
2. *Iraq*
3. *Lebanon*
4. *Syria*

Select the correct answer using the code given below:

(a) 1, 2, and 3

(b) 2 and 3 only

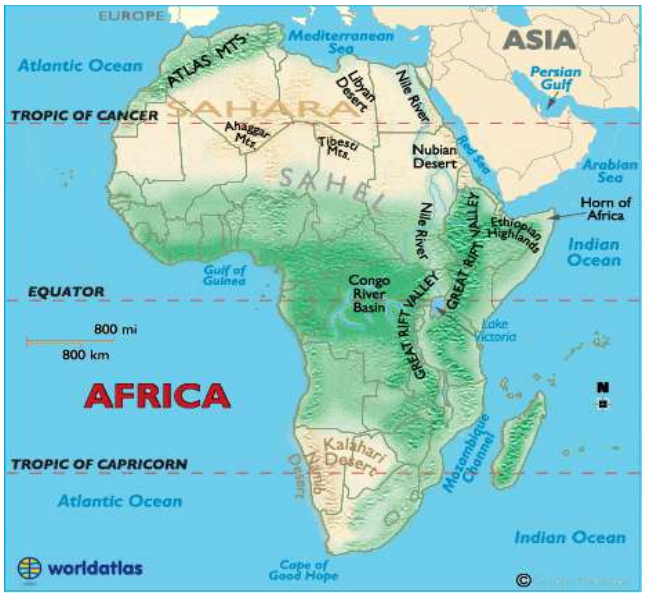
(c)3 and 4 only

(d) 1,3, and 4 only

Space for Notes

Physical features of Africa:

- ***Mountains and Highlands:***
    - ***Atlas Mountains:*** *These mountains are in North Africa, stretching across Morocco, Algeria, and Tunisia. They consist of three parallel ranges: the Tell Atlas, the Sahara Atlas, and the Anti-Atlas.*
    - ***Ethiopian Highlands:*** *A rugged plateau region in* ***Ethiopia.*** *They are formed by volcanic activity. It has fertile volcanic soil.*
    - *Katanga plateau*
    - *Drakensberg plateau*
    - *Adamawa Highlands*
    - *Angola Highlands(Bie Plateau)*
    - *Ahaggar mountain or Hoggar mountains*
    - *Tibesti mountain*
    - *Mount Kilimanjaro: The tallest mountain in Africa (Tanzania)*



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- Mount Kenya

- ***Great Rift Valley:***
  - *A massive geological trench that runs* ***from Ethiopia to Mozambique.***
  - *It extends along the Red Sea, the Gulf of Aqaba, and along the River Jordan till the Dead Sea.*
  - *It is the most extensive valley system on land.*
  - *It has too many lakes, such as* ***Lake Tanganyika, Lake Edward, Lake Albert, Lake Turkana, and Lake Malawi (Nyasa).***
  - ***Lake Victoria is not part of the Rift Valley.***

- ***The Dead Sea:*** *The Dead Sea is a unique saltwater lake located in the* ***Middle East, bordered by Jordan to the east and Israel and Palestine to the west.*** *It is one of the most famous natural wonders due to its extreme salinity and low elevation.*

Rivers Systems of Africa:

- ***Rivers that drain into the Atlantic Ocean:***
  - *Senegal*
  - *Volta*
  - *Niger*
  - *Congo*
  - *Orange*

- Nile

- ***Rivers that drain into the Indian Ocean:***
  - Zambezi
  - Limpopo

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Prelims PYQ

Q) The term "Levant" often heard in the news roughly corresponds to which of the following regions?

(a) Region along the eastern Mediterranean shores

(b) Region along North African shores stretching from Egypt to Morocco

(c) Region along the Persian Gulf and the Horn of Africa

(d) The entire coastal Mediterranean Sea area

Q) Turkey is located between

(A) Black Sea and Caspian Sea

(B) Black Sea and Mediterranean Sea

(C) Gulf of Suez and Mediterranean Sea

(D) Gulf of Aqaba and Dead Sea

Q) Consider the following pairs:

The region is often in the news		country
1. Chechnya	:	Russian Federation
2. Darfur	:	Mali
3. Swat Valley	:	Iraq

Which of the above pairs is/are correctly matched?

(a) 1 only

(b) 2 and 3 only

(c) 1 and 3 only

(d) 1, 2, and 3

Q) Which one of the following countries of South-West Asia does not open out to the Mediterranean Sea?

(a) Syria

(b) Jordan

(c) Lebanon

(d) Israel

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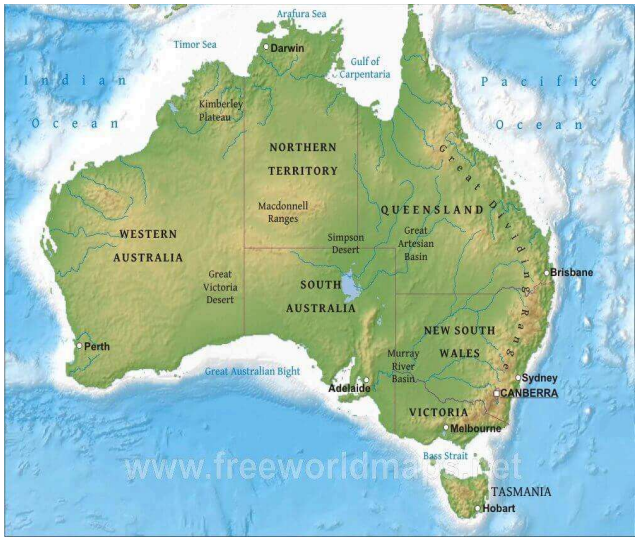
Australia

- It lies in the Southern Hemisphere, between the Pacific Ocean(east side) and the Indian Ocean(west side)
- The Tropic of Capricorn cuts the continent almost in half.
- **Great Barrier Reef:**
  - **It is the World's Largest Coral Reef System.**
  - The **Great Barrier Reef** is the **largest coral reef system** in the world, known for its incredible marine biodiversity. It is located off the **northeastern coast of Australia**, in the **Coral Sea**.



Coral Reefs:

- **Coral reefs** are underwater ecosystems made up of **calcium carbonate structures** secreted by tiny marine animals called **coral polyps**.
- Coral polyps(they provide habitat) are animals that live together with zooxanthellae(provide food), and together they form a coral reef.
- Coral reefs are calcareous deposits of coral polyps and zooxanthellae.
- These reefs are some of the most **biodiverse** ecosystems on Earth, providing shelter and food for countless marine species.

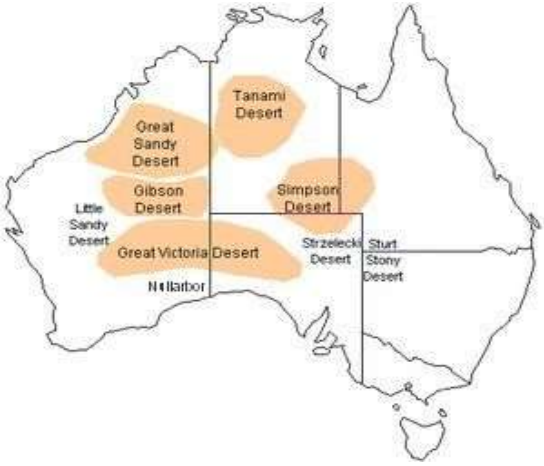
- ***Types of Coral Reefs***
  - ***Fringing Reefs***: *They are found close to shore, directly attached to land (e.g., **Red Sea Reefs**). They are smaller in size.*
  - ***Barrier Reefs***: *They are separated from land by a **lagoon** (e.g., **Great Barrier Reef, Australia**). They are large in size.*
  - ***Atolls***: *They are Circular reefs surrounding a **lagoon**, usually formed from sinking volcanic islands (e.g., the **Maldives**).*

Mountains and Highlands:

- ***Great Dividing Range***: *The Longest mountain range, stretching along the east coast.*
- ***Mount Kosciuszko** is the **Highest peak in Australia***
- ***MacDonnell Ranges** in central Australia.*

Deserts:

- ***Great Victoria Desert: The** Largest Desert in Australia*
- ***Simpson Desert**: Known for red sand dunes*
- ***Gibson Desert**: Located in Western Australia*
- *Tanami Desert*
- *Swart Stony Desert*
- *Simpson Desert*



Plateaus and Plains:

- ***Western Plateau***: *It covers most of Western Australia*
- ***Nullarbor Plain***: *it is a Large, flat, arid region in southern Australia*

Great Artesian Basin:

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- *The **Great Artesian Basin (GAB)** is one of the **largest underground freshwater reservoirs** in the world.*
- *It is a vital water source for **Australia's** dry interior, supporting agriculture, livestock, and communities.*
- ***Artesian basin:***
    - *An artesian basin is a geological formation where groundwater is trapped under pressure due to the folded topography, in which soft rock is trapped between hard rock from above and below.*
    - *In an artesian basin, water **can flow naturally on the surface** due to pressure.*

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Prelims PYQ

Q) Turkey is located between

(A) Black Sea and Caspian Sea

(B) Black Sea and Mediterranean Sea

(C) Gulf of Suez and Mediterranean Sea

(D) Gulf of Aqaba and Dead Sea

Q) What is the correct sequence of occurrences of the following cities in South-East Asia as one proceeds from south to north?

1. Bangkok

2. Hanoi

3. Jakarta

4. Singapore

Select the correct answer using the code given below.

(a) 4-2-1-3

(b) 3-2-4-1

(c) 3-4-1-2

(d) 4-3-2-1

Q) Consider the following pairs

Geographical Feature ***Region***

(a) Abyssinian Plateau : Arabia
(b) Atlas Mountains : North-Western Africa
(c) Guiana Highlands : South-Western Africa
(d) Okavango Basin : Patagonia

Which of the pairs given above is/are correctly matched?

(a) 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2, 3, and 4

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Caspian Sea:

- **It is The World's Largest Inland Body of Water**
- The **Caspian Sea** is the **largest enclosed inland body of water** on Earth.
- **Bordering Countries: Russia, Kazakhstan, Turkmenistan, Iran, Azerbaijan.**

Australia:

- Australia is both a continent and a country.
- It is the **6th largest country by land area** and the **smallest continent**.

- It lies entirely **south of the Equator**, with the **Tropic of Capricorn bisecting it**.
- It is a **newly settled region** compared to other continents.
- It is the **largest island in the world**.

Types of settlement:

- ***Old settlement:***
  - *Established long ago, often near rivers, fertile lands, or trade routes.*
  - *They are discovered early and they have given birth to ancient civilizations, such as example Indus Valley Civilisation and the Mesopotamian Civilisation in Asia.*
- ***New settlement:***
  - *Recently developed, often due to industrialization, migration, or government planning.*
  - *Example: Brasília (Brazil), Canberra (Australia).*

Water Bodies in Australia:

- ***Torres Strait:*** *A Narrow sea passage between Australia and Papua New Guinea, connecting the Coral Sea to the Arafura Sea.*
- ***Great Barrier Reef:*** *The World's largest coral reef system, located in the Coral Sea off the northeastern coast of Australia.*
- ***Tasman Sea:*** *A Body of water between Australia and New Zealand.*

- ***Bass Strait*** *separates the Australian mainland from Tasmania.*
- ***Great Australian Bight:*** *A large oceanic bay along the southern coast of Australia, part of the Indian Ocean.*
- ***Timor Sea:*** *Lies between Australia and Timor Island, rich in oil and gas reserves.*

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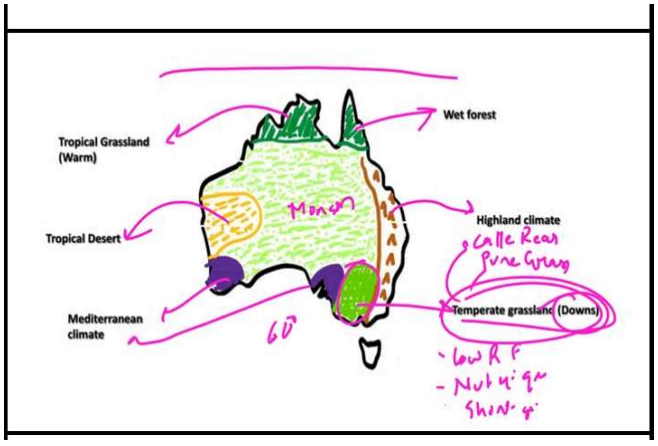
- ***Arafura Sea:*** *Located between Australia and New Guinea, connecting to the Timor and Coral Seas.*

Grasslands and Other Biomes in Australia:

- ***Tropical Grassland (Savanna):*** *Found in northern Australia, includes areas like the Northern Territory and Queensland, home to sparse trees and tall grasses.*



- ***Tropical Desert:*** *Includes the Great Victoria and Simpson Deserts, characterized by arid conditions and sparse vegetation.*
- ***Wet Forest:*** *Found in coastal areas, especially in Tasmania and eastern Australia, featuring dense, high-rainfall forests.*
- ***Temperate Grassland:***
    - *They are also known as the "**Downs,**" found in eastern Australia, mainly used for agriculture and livestock grazing.*
    - *They are short, pure, and nutritious grasses that lead to the cater rearing in this region.*
    - *Famous for ship and dairy farming.*

Population Distribution:

- *Around **85% of Australians** live in urban areas, primarily along the **eastern and southeastern coasts**.*
- *The central and western parts of Australia (Outback) are sparsely populated due to harsh climatic conditions (deserts and arid regions).*
- ***Major Cities:*** *The majority of the population is concentrated in cities like **Sydney, Melbourne, Brisbane, Perth, Darwin, and Adelaide**.*

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- ***Arnhem Land***:
  - *It is located in the **northeastern part of the Northern Territory**, Australia.*
  - *It is occupied by the Australian original inhabitants.*

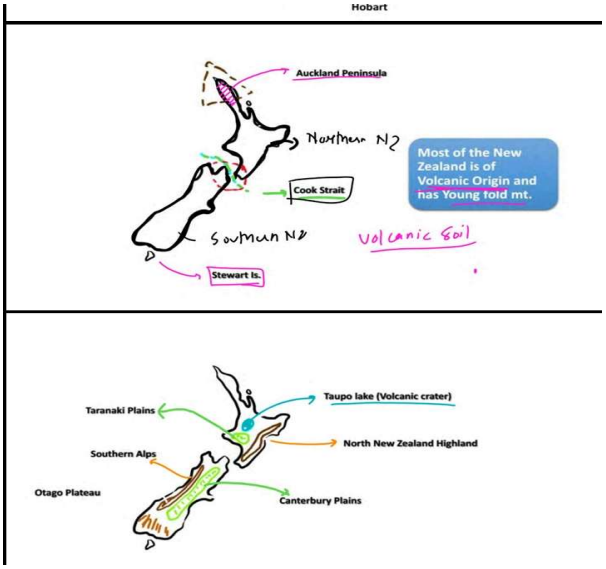
- ***Broken Hill***:
  - *Situated in **far western New South Wales**, near the South Australia border.*
  - *Known as "**The Silver City**", Broken Hill is one of the world's richest sources of **silver, lead, and zinc**.*
- ***Alice Springs**: A town in **Central Australia**, known as the gateway to the Outback.*

New Zealand:

- *Most of New Zealand is of volcanic origin and has young folded mountains.*
- ***Cook Strait***:
  - *Cook Strait is the body of water that separates **New Zealand's North Island and South Island**.*
  - *It connects the **Tasman Sea** (to the west) with the **Pacific Ocean** (to the east).*
- ***Auckland Peninsula***:
  - *The **Auckland Peninsula** is the **northern extension** of New Zealand's **North Island**.*
  - *characterized by **volcanic landscapes, harbors, and fertile land**.*
- ***Stewart Island (Rakiura)***:
  - ***Stewart Island** is the **third-largest island of New Zealand**, located **south of the South Island**.*
  - *It is separated from the South Island by **Foveaux Strait**.*

Grasslands and plains of New Zealand:

- ***Taranaki Plains:***
  - ***Location:*** *Western North Island, surrounding Mount Taranaki.*
  - *It is* ***Fertile volcanic plains****, formed by ash deposits from Mount Taranaki.*
- ***Canterbury Plains:***
  - ***Location:*** *Eastern South Island, stretching from the Southern Alps to the Pacific Ocean.*
- ***Southern Alps:***
  - ***Location:*** *Stretching along the western South Island.*
- ***Otago Plateau:***
  - ***Location:*** *Central Otago, South Island.*
  - ***A semi-arid plateau with rolling hills and schist rock formations.***



- ***Taupo Lake:***
  - ***Location:*** *Central North Island.*
  - ***Size:*** ***The largest lake in New Zealand****, formed in a volcanic caldera.*
- ***North New Zealand highlands:***
  - ***Location:*** *Stretching across the central and northern regions of the North Island.*
  - *It includes Kaimai Range, Coromandel Range, and Raukumara Range.*

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Prelims PYQ

Q) Which one of the following groups of plants was domesticated in the New World and introduced in the Old World?

A) Tobacco, Coca, Rubber

B) Tobacco, Cotton, Rubber

C) Cotton, Coffee, Sugarcane

D) Rubber, Coffee, Wheat

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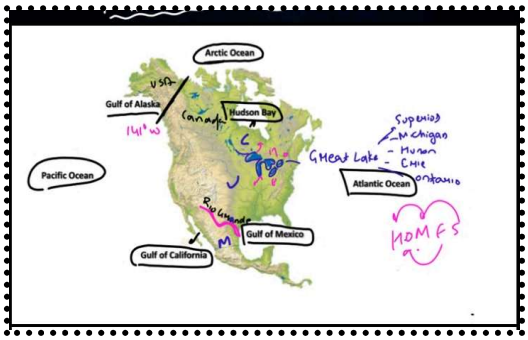
North America

- ***Countries in North America are***
  - *Canada*
  - *United States*
  - *Mexico*
- ***Central America (7 Countries):***
  - *Countries in Central America are* ***Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.***
- ***Caribbean nation:***
  - ***Countries in the caribbean:*** *Cuba, dominica, dominican republic, puerto rico.*

water bodies along North America:

- *Gulf of Alaska*
- *Pacific Ocean*



- *Gulf of California*
- *Hudson Bay*
- *Gulf of Mexico*
- *Atlantic Ocean*

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The Great Lakes of North America:

- *The Great Lakes are a group of five interconnected freshwater lakes located on the border between the United States and Canada.*
- ***The Five Great Lakes***

  - ***Lake Superior:*** *The* ***Largest*** *and deepest of the Great Lakes.*
  - ***Lake Michigan:*** *The* ***only Great Lake entirely within the USA.***
  - ***Lake Huron:*** *It contains the world's largest freshwater island: Manitoulin Island.*
  - ***Lake Erie:*** *Shallowest and warmest lake, known for fishing.*
  - ***Lake Ontario:*** *Smallest in surface area but deep and connected to the Atlantic via the Saint Lawrence River.*
- ***Impact of the Great Lake region:***
  - ***Westerly winds*** *rise over the* ***Rocky Mountains****, causing* ***orographic rainfall*** *on the western slopes.*
  - *As the air* ***rises****, it cools, condenses, and leads to* ***precipitation****.*

- *After crossing the **Rocky Mountains**, the **air descends** on the eastern slopes.*
- *It undergoes **adiabatic compression**, heating up and becoming **dry**.*
- *This warm, dry wind is called the **Chinook**, known as the "**snow eater**" because it rapidly melts snow.*
- *As the **Chinook winds move eastward**, they **pick up moisture** from the **Great Lakes** due to evaporation.*
- *This increases **humidity** in the air mass.*
- *When the **moist air reaches the Appalachian Mountains**, it is forced to rise again.*
- *This leads to **condensation and rainfall** on the **western slopes of the Appalachians**.*

Rio Grande River:

- *It forms much of the border between the **United States** (Texas) and **Mexico**.*

Types of boundaries between Canada and the USA:

- *The boundary between **Canada and the United States** consists of different types of borders:*
  - ***Geometric Boundary:** The **49th parallel** serves as a straight-line boundary from the Great Lakes to the Pacific Ocean.*
  - ***Physical Boundary:** The **Great Lakes and St. Lawrence River** act as natural boundaries in the eastern part of the border. The **Rocky Mountains** form a natural division between British Columbia (Canada) and Montana (USA).*
  - ***Cultural and Political Boundary:** The border reflects historical agreements like the **Oregon Treaty (1846)** and maintains a peaceful international division.*

Physical features of North America:

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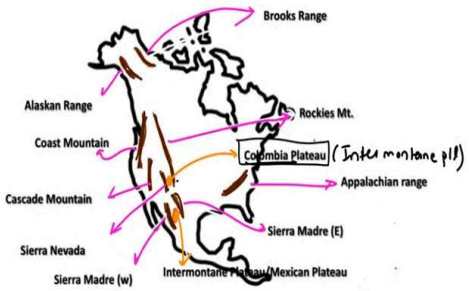
- **Brooks Range**: A rugged mountain range in northern Alaska, USA, forming a natural barrier between the Arctic and the rest of the state.
- **Rocky Mountains**: A massive mountain system stretching from Canada to the southwestern USA, known for its high peaks and diverse ecosystems.
- **Columbia Plateau**: A vast volcanic plateau in the northwestern USA, covering parts of Washington, Oregon, and Idaho.
- **Appalachian Range**: One of the oldest mountain ranges in North America, extending from Canada to Alabama, known for its rolling hills and rich forests.
- **Sierra Madre**: A major mountain system in Mexico, divided into Sierra Madre Occidental, Oriental, and del Sur, influencing the country's climate and biodiversity.



- **Intermontane Plateau**: A highland area between mountain ranges, such as the Columbia, Colorado, and Great Basin plateaus in North America.
- **Cascade Mountains**: A volcanic mountain range in the Pacific Northwest, home to famous peaks like Mount Rainier and Mount St. Helens.
- **Coast Mountains**: A rugged range along the Pacific coast of Canada and Alaska, heavily glaciated and part of the Pacific Ring of Fire.
- **Alaskan Range**: A prominent mountain range in southern Alaska, home to Denali (Mount McKinley), the highest peak in North America.

Desserts in North America:

- **Mojave Desert**: Located in the southwestern United States, mainly in California and Nevada, known for Death Valley, one of the hottest places on Earth.
- **Sonoran Desert** – Spans the southwestern U.S. (Arizona, California) and northwestern Mexico, famous for the **saguaro cactus** and high biodiversity.

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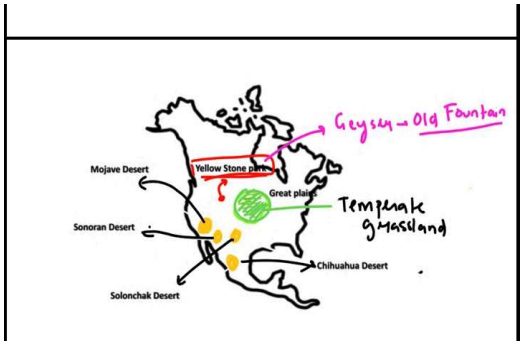
- ***Solonchak Desert*** *– Found in Central Asia, characterized by saline soils due to high evaporation and poor drainage, making it unsuitable for agriculture.*



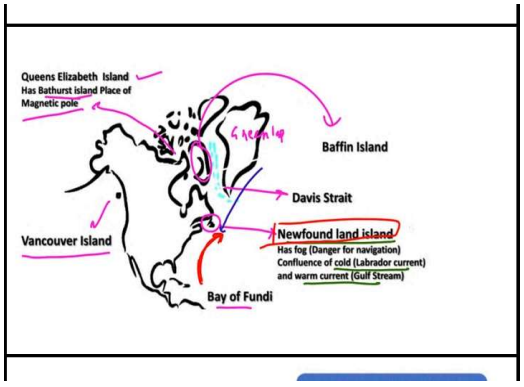
- ***Yellowstone desert:*** *A Geyser is present in Yellowstone desert, which is also known as Old faithful.*
    - ***Hot springs:*** *Gradual or slow eruption of hot underground water is known as hot springs. For example, the hot springs of Rajgir, Bihar.*
    - ***Geyser:*** *A Sudden eruption(like a fountain) is known as a geyser.*
- ***Chihuahua desert:*** *The largest desert in North America, spanning northern Mexico and parts of the U.S. (Texas, New Mexico, Arizona). It has a* ***semi-arid climate*** *with diverse flora like agave and creosote bush.*

Temperate Grasslands:

- ***Prairies (USA and Canada)****: Vast temperate grasslands covering the central part of North America, divided into tallgrass, mixed grass, and shortgrass prairies.*

Islands:

- ***Baffin Island:*** *The Largest island in Canada, located in the Arctic, part of the Nunavut territory.*
- ***Davis Strait:*** *A body of water separating Greenland and Baffin*



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Island, linking the Arctic Ocean with the Atlantic.

- **Queen Elizabeth Islands:** A group of Arctic islands in northern Canada, known for extreme cold and ice-covered terrain.
    - It has Bathurst Island, a place of the magnetic pole.
- **Vancouver Island:** Located off the west coast of Canada in British Columbia, famous for its forests and wildlife.
- **Newfoundland Island:**
    - This island is famous for the cold (Labrador current) and the warm current(Gulf Stream.

Isthmus of Panama:

- The **Isthmus of Panama** is a narrow strip of land connecting **North America and South America**, separating the **Pacific Ocean** from the **Caribbean Sea** (Atlantic Ocean).
- Initially, North America and South America have very different kinds of life forms.
- Only after the formation of the Isthmus of Panama, animals like armadillo, anteater etc, started migrating. This is known as the **Great American Exchange.**

Important Seas of the World:

- **Mediterranean Sea:**
    - It is an **intercontinental sea** that is **bordered by** the continent of **Europe in the north**, by **Asia in the east,** and by **Africa in the south.**
    - In the west, the **Mediterranean Sea is connected to the Atlantic Ocean via the narrow Strait of Gibraltar.**
    - **Bordering Countries:**

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- **22 countries and one territory** (Gibraltar - a British Overseas Territory) have coasts on the Mediterranean Sea.
- The **European Countries** are **Spain, France, Italy, Malta, Monaco, Slovenia, Croatia, Bosnia** and Herzegovina, Montenegro, **Albania**, and **Greece**.
- The **West Asian (Middle Eastern) countries** bordering the Mediterranean Sea are **Turkey, Syria, Lebanon, Israel, the Palestinian Gaza Strip**, and the divided island of **Cyprus**.
- Five **North African nations** have coasts on the Mediterranean Sea: **Morocco, Algeria, Tunisia, Libya, and Egypt**.

- **Red sea:**
  - The **Red Sea** is bordered by **six countries** from Africa and the Arabian Peninsula
  - The Red Sea is surrounded by Djibouti, Egypt, Sudan, Eritrea, Saudi Arabia, and Yemen
  - **Important Straits of the Red Sea:**
    - **Strait of Bab el Mandeb**: Connects the **Red Sea** to the **Gulf of Aden** (Arabian Sea). It separates **Yemen** (Asia) from **Djibouti and Eritrea** (Africa).
    - **Suez Canal**: A **man-made waterway** in **Egypt**, connecting the **Red Sea** to the **Mediterranean Sea**, enabling direct shipping between Europe and Asia.
- **Moving from the Mediterranean Sea to the Sea of Azov, we have**
  - Aegean sea
  - Dardanelles Strait
  - Sea of Marmara
  - Black sea
  - Bosporus Strait

- Kerch strait
- Seas of Azou

South America

- South America is made up of **13 countries**, including **Brazil, Argentina, Colombia, and Peru**. Among them, **Paraguay and Bolivia** are the only **landlocked nations**, lacking direct access to the ocean.
- The Equator and the Tropic of Capricorn pass through South America.

- The **Equator (0° latitude)** passes through **Ecuador, Colombia, and Brazil**.
- The **Tropic of Capricorn (23.5° S latitude)** passes through **Chile, Argentina, Paraguay, Brazil**, and **Bolivia**.

Waterbodies:

- **Isthmus of Panama:** A narrow strip of land connecting North and South America, separating the Pacific and Atlantic Oceans.
- **Gulf of Darién:** A body of water in the Caribbean Sea, located between Panama and Colombia.
- **Gulf of Panama:** A large inlet of the Pacific Ocean along the southern coast of Panama.
- **Pacific Ocean:** The world's largest and deepest ocean, covering the western coast of the Americas.
- **Magellan Passage: Strait of Magellan**, a navigable sea route in southern Chile, connecting the Atlantic and Pacific Oceans. These are named after Magellan, who was the first person to circumnavigate the globe.

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- ***Drake Passage***: *A waterway between **Cape Horn (South America) and Antarctica**, linking the Atlantic and Pacific Oceans. It is very difficult to navigate.*
- ***Tierra del Fuego***: *An archipelago at the southern tip of South America, shared by Chile and Argentina.*
- ***Atlantic Ocean***: *The second-largest ocean, separating the Americas from Europe and Africa.*
- ***Mouth of the Amazon River***: *The point where the Amazon River empties into the Atlantic Ocean, forming a vast delta in northern Brazil.*
- *The **Cape of São Roque** is the easternmost point of mainland Brazil(South America), located in the state of **Rio Grande do Norte**.*
- ***Cape Horn** is the southern tip of South America.*

Physical features of South America:

- ***Andes Mountain Range***: *The longest continental mountain range, stretching along the western coast of South America from Venezuela to Argentina and Chile.*
- ***Bolivian Plateau (Altiplano)***: *A high-altitude plateau between the eastern and western Andes in Bolivia, Peru, Chile, and Argentina.*
- ***Mount Aconcagua***: *The highest peak in South America (6,961 m), located in Argentina.*
- ***Volcanic Peaks***: *Many volcanoes in the Andes, including active and dormant ones, formed due to the subduction of the Nazca Plate.*
- ***Chimborazo***: *A volcano in Ecuador; its summit is the farthest point from the Earth's center due to the planet's equatorial bulge.*
- ***Cotopaxi***: *One of the world's highest active volcanoes, located in Ecuador.*
- ***Ojos del Salado***: *The highest active volcano (6,893 m), located on the Chile-Argentina border.*
- ***Lakes***: *Numerous lakes exist in the Andes and surrounding regions.*
    - ***Lake Titicaca***: *The largest and highest navigable lake in the world, situated between Bolivia and Peru.*
    - ***Lake Poopó***: *A shallow saltwater lake in Bolivia, which has significantly shrunk due to climate change and water diversion.*

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- ***Guiana Highlands:*** *A vast, ancient plateau region in northern South America, covering parts of* ***Venezuela, Guyana, Suriname, and Brazil, known for its tepuis (tabletop mountains).***
    - *It is a hot and humid region(near the equator), which leads to the laterization; therefore, aluminium and iron accumulate in the top layer.*
    - *It has laterite soil and is famous for* ***bauxite mining, plantation crops (teak, coffee, rubber, etc), and brick making.***
    - *It is part of the Gondwana land.*

- ***Brazil Highland:***
    - *The southern part of the plateau is* ***Mato Grosso.***
    - *There are rock similarities between the* ***Brazilian highlands and the Koma Mountains of Africa.***
- ***Patagonia plateau:***
    - *It is partly volcanic.*
    - *It is a desert region because it lies on the leeward side(west side) of the Andes Mountains, so it is also known as a rain shadow desert plateau.*
- ***Central Highlands:*** *it refers to* ***elevated regions in central parts of the continent****, such as*

- **Brazilian Highlands**: Covering central and eastern Brazil, this vast plateau influences river systems and climate patterns.
- **Andean Altiplano**: high plateau in Bolivia, Peru, Chile, and Argentina, situated between the eastern and western Andes.
- **Colombian and Venezuelan Highlands**: Mountainous areas in northern South America, including parts of the **Guiana Highlands**.

Vegetation:

- **Selvas**: these are Dense Equatorial Forest.
- **Campos and Llanos:** These are Tropical Grasslands,
- **Sertao and Catinga:** these are Dry Scrubland,
- **Pampas:** These are Temperate grasslands,
- **Extreme desert:** it is also known as the Atacama Desert(Chile desert). It is the world's driest desert.
- **Semi-Arid:** it is also known as the Patagonia Desert. It is a rain shadow desert.

River system:

- **Amazon River System:**
  - **The world's largest river** by volume and drainage basin.
  - **Originates in the Andes Mountains** of Peru and flows into the Atlantic Ocean.
  - **The Amazon Rainforest(equatorial forest)**, also called the "**Lungs of the Planet,**" surrounds it, supporting vast biodiversity.
  - **Petroleum reservoirs** exist near its mouth.
  - **Deforestation and forest fires,** threatening ecosystems.
  - It drains into the Atlantic Ocean.

- **Paraná and Paraguay River System:**

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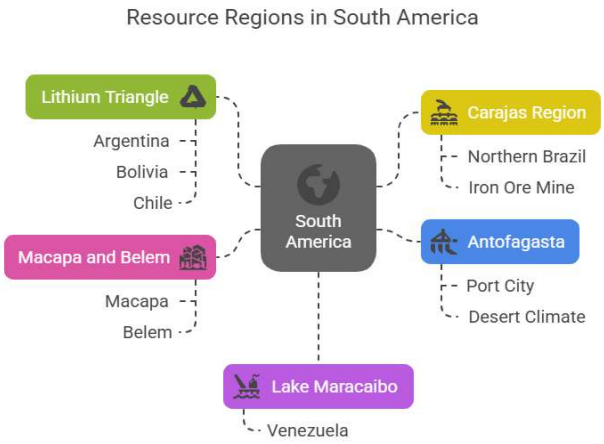
- ***The Paraná and Paraguay Rivers*** *originate in the* ***Brazilian Highlands***.
- *The* ***Paraná River*** *meets the* ***Uruguay River*** *before draining into the* ***Río de la Plata***.
- *Crucial for* ***hydroelectric power***, *with major dams like* ***Itaipú*** *and* ***Yacyretá***.

- ***Uruguay River***
  - ***Source***: *Brazilian Highlands*.
  - ***Flows into*** *the* ***Río de la Plata***, *forming a natural border between Argentina and Uruguay*.

Resources in South America:

- ***Lithium triangle:***
  - *The* ***Lithium Triangle*** *is a region in* ***South America*** *covering parts of* ***Argentina, Bolivia, and Chile***.
  - *It is also called* ***the ABC triangle***.



  - *It contains over* ***50% of the world's lithium reserves***, *mainly in* ***salt flats*** *(salares)*.

- ***Lake Maracaibo:***
  - *It is a large* ***brackish tidal bay*** *in* ***Venezuela***, *a lake*.
  - *It is famous for oil production*.

- ***Carajas region:***
  - *Located in* ***northern Brazil***, *in the state of* ***Pará***.
  - *Home to* ***one of the world's largest iron ore mines***

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- **Antofagasta:**
  - *A **port city in northern Chile**, known for **mining** and a **desert climate**.*
  - *It is famous for its copper production.*
- **Macapa and Belem:**
  - ***Macapa:** The capital city of Amapá state in Brazil is located near the **Equator** on the **Amazon River**.*
  - ***Belém**: A major **port city in northern Brazil**, near the **mouth of the Amazon River**.*

Resources:

- **Definition:** *Resource means something that has utility and value.*
- *Some of the examples of resources in geography are*
  - ***Mineral resources** such as iron ore, bauxite, gold, and silver.*
  - ***Energy resources** include petroleum reserves, shale gas, coal, and natural gas.*

Resource Distribution in the world:

- **North America:**
  - ***Coal**: Found in the **Appalachian Mountains**, fueling industries and power generation.*
  - ***Oil and Gas**: oil and gas reserves are located in the **Gulf of Alaska** and the **Gulf of Mexico**, which are major sources of energy.*
  - ***Iron Ore**: Deposits in **Hamilton (Canada)**, **Schefferville**, and **Lake Superior** support the steel industry.*
  - ***Gold**: Found along the **Colorado River**, historically significant for mining.*
  - ***Lead, Zinc, Silver**: mined in the **Ozark Plateau**, used in various industries.*
  - ***Steel Industry**: Developed near the **Great Lakes**, using Canadian iron ore and Appalachian coal.*
  - ***Industrial Centers**: **Pittsburgh** is known as the **steel capital of the world**, while **Detroit** is famous for automobiles.*

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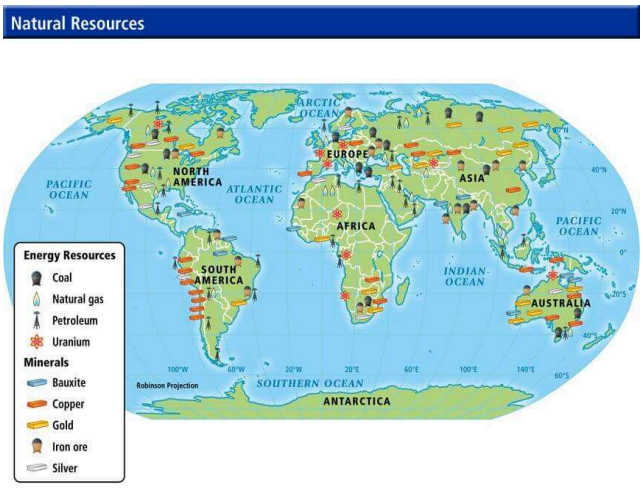
- ***South America:***
  - ***Bauxite:*** *Mined in the* ***Guyana Highlands****, essential for aluminum production.*

    Iron Ore: *Found in the* ***Brazilian Highlands****, a major global supplier.*
  - ***Oil and Gas:*** *Rich reserves in* ***Lake Maracaibo, Venezuela****, are a key energy source.*



  - ***Borax and Phosphorus:*** *Extracted from the* ***Atacama Belt****, used in fertilizers and industry.*
  - ***Phosphorus:*** *Mined in* ***Peru****, important for agriculture.*
  - ***Copper:*** ***Chiquicamata Mine, Chile****, one of the world's largest copper mines.*
  - ***Lithium Triangle:*** *Found in the* ***ABC Triangle (Argentina, Bolivia, Chile)****, essential for batteries.*
- ***Africa:***
  - ***Oil:*** *Reserves in* ***Libya, Tunisia, Nigeria, and Botswana****, crucial for exports.*
  - ***Diamonds and Gold:*** *Major deposits in* ***South Africa****, a global leader in mining.*
  - ***Copper and Cobalt:*** *Found in the* ***Katanga Plateau****, vital for electronics and energy storage.*
  - ***Manganese:*** *Rich deposits in* ***Kalahari****, used in steelmaking.*
- ***Australia:***
  - ***Coal:*** *Abundant in the* ***Sydney Basin****, powering industry and exports.*

- ***Oil***: *Found in* ***Melbourne****, supporting energy needs.*
- ***Gold***: ***Perth*** *is a major gold mining hub.*
- ***Copper***: *Extracted from* ***Broken Hill****, a major mineral center.*
- ***Gold and Silver***: *Found in the* ***Kalgoorlie Basin****, supporting global supply.*
- ***Iron Ore***: *The* ***Hamersley Range*** *is one of the world's largest sources of iron ore.*

- ***China:***
  - ***Oil Resources:*** *Oil reserves are found in the* ***Xinjiang Basin****, a key energy source.*
  - ***Coal***: *Coal is Abundant in the* ***Shanxi region****, one of China's largest coal-producing areas.*
  - ***Iron Ore***: *Deposits in the* ***Mukden Triangle*** *and* ***Zhengzhou****, crucial for steel production.*
  - ***Manchuria***: *Manchuria is among* ***China's oldest industrialized regions****, historically known for heavy industries.*
  - ***Western China*** *is resource-scarce compared to the east, with limited industrial activity.*
  - ***Export Centers***: ***Shanghai, Hong Kong, and Macau*** *serve as major trade and export hubs.*
  - ***Southern China***: *Primarily focused on* ***agriculture****, producing rice, tea, and other crops.*
  - ***Eastern China*** *is rich in* ***natural resources****, making it the economic and industrial heart of the country.*
- ***Europe and Russia:***
  - ***Coal:***
    - ***Ruhr Valley (Germany)*** *– One of* ***Europe's largest coal mining regions****, historically important for Germany's industrial growth.*
    - ***Pennine Coal Field (UK)*** *– A key coal-producing area in* ***England****, crucial during the Industrial Revolution.*

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- **Meuse Basin:** *The* **Meuse Basin** *is located in* **Belgium, France, and the Netherlands**, *and it historically contained significant* **coal reserves**.
- **Saxony (Germany)**: *Rich in* **lignite (brown coal)**, *used for power generation.*
- **Ural (Russia)**: *It contains* **coal reserves**, *though major Russian coal production occurs in* **Kuznetsk Basin (Kuzbass)** *and* **Siberia**.

- **Oil:** *oil resources found along the Pechora basin, Lena basin, Donbass basin, Barents Sea, and Donetz.*
- **Iron Ore:** *Europe has limited iron ore reserves, with* **Bilbao Mine (Spain)** *being a notable source.*
- *In Russia, iron ore is found along the* **Ural Mountains, Kuznets, Donbas, and Angarsk regions.**

UPSC Mains PYQs

Q. Briefly mention the alignment of major mountain ranges of the world and explain their impact on local weather conditions with examples (2021)

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UPSC Prelims PYQs

Q. The longest border between any two countries in the world is between : **(2024)**

(a) Canada and the United States of America
(b) Chile and Argentina
(c) China and India
(d) Kazakhstan and Russian Federation

Answer : (a)

Q. Consider the following statements : (2024)

1. The Red Sea receives very little precipitation in any form.
2. No water enters the Red Sea from rivers.

Which of the statements given above is/are correct?

(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

Answer : (c)

Q. Which of the following countries are well known as the two largest cocoa producers in the world? (2024)

(a) Algeria and Morocco
(b) Botswana and Namibia
(c) Cote d'Ivoire and Ghana
(d) Madagascar and Mozambique

Answer : (c)

Q. Consider the following countries : (2024)

1. Finland
2. Germany
3. Norway
4. Russia

How many of the above countries have a border with the North Sea ?

(a) Only one
(b) Only two
(c) Only three
(d) All four

Answer : (b)

Q. Consider the following countries : **(2023)**

1. Bulgaria
2. Czech Republic
3. Hungary
4. Latvia
5. Lithuania
6. Romania

How many of the above-mentioned countries share a land border with Ukraine?

(a) Only two (b) Only three
(c) Only four (d) Only five

Answer : (a)

Q. Which one of the following is a part of the Congo Basin? **(2023)**

(a) Cameroon (b) Nigeria
(c) South Sudan (d) Uganda

Answer : (a)

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Q. Which one of the following lakes of West Africa has become dry and turned into a desert ? [2022]

(a) Lake Victoria

(b) Lake Faguibine

(c) Lake Oguta

(d) Lake Volta

Answer : (b)

Note: Unit-wise notes are provided before the commencement of the class. Students are requested to add any additional topics covered during the lecture. Please use the margin space or additional pages for these notes.

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